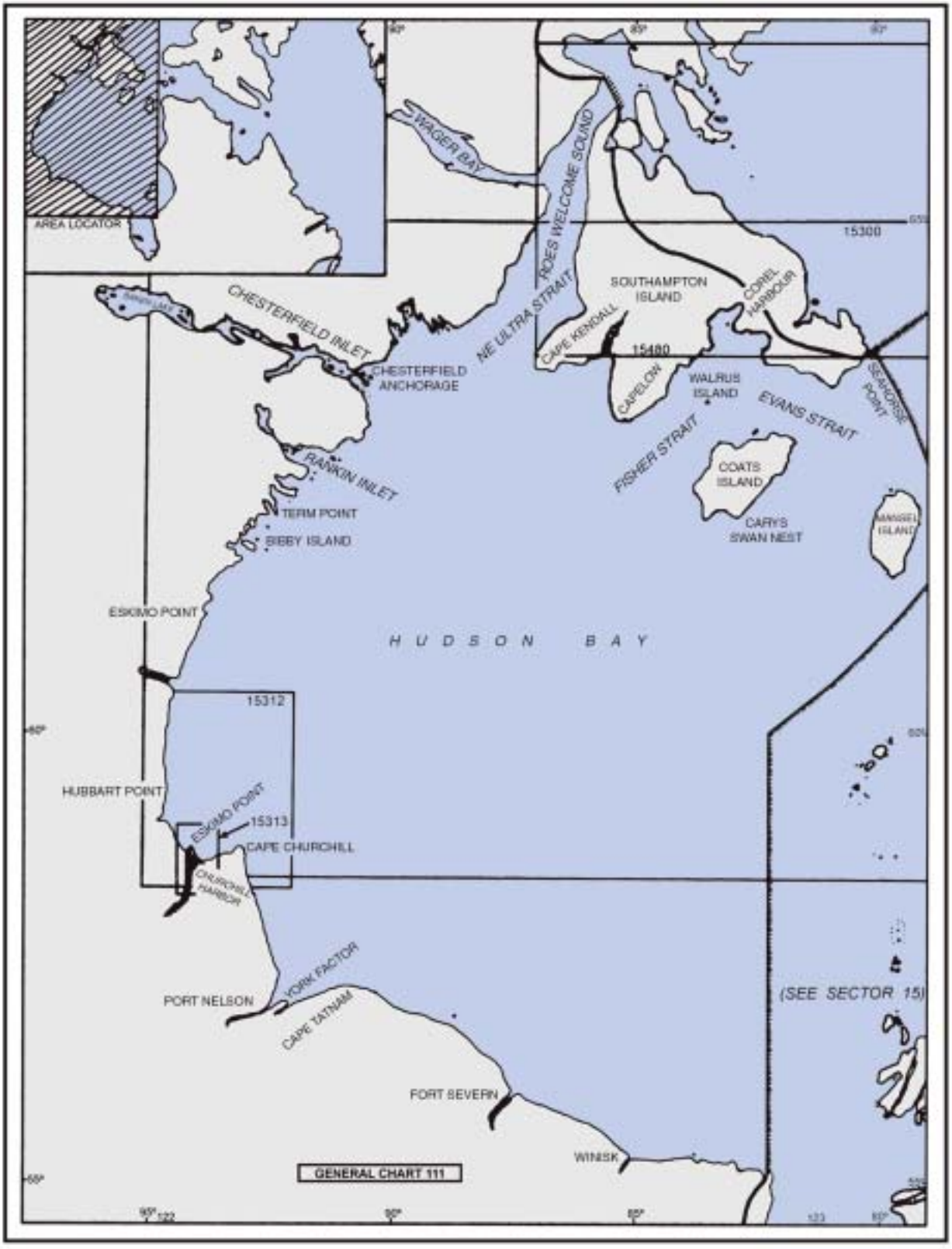
Click on "See Sector" to be hotlinked to that Sector.



Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

SECTOR **16** — CHART INFORMATION

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SECTOR 16

HUDSON BAY—NORTH AND WEST SIDES

Plan.—This sector describes the N and W sides of Hudson Bay. The descriptive sequence extends W from Mansel Island, N through Roes Welcome Sound, S to Port Nelson, and then SE to Cape Henrietta Maria.

General Remarks

16.1 Hudson Bay is a very large inland sea which penetrates deeply into the NE part of the North American Continent. It is almost completely landlocked, but is joined to the Atlantic Ocean on its E side by Hudson Strait, and to the Arctic Ocean on its N side by Foxe Channel, Fury Strait, and Hecla Strait.

For descriptive purposes of this sector, the N boundary of Hudson Bay may be considered to extend from Pointe Nuvuk, the NW extremity of Ungava Peninsula, to Leyson Point, the SE extremity of Southampton Island. The boundary then follows along the S shore of this island to Cape Kendall and across the S entrance to Ne Ultra Strait, to Cape Fullerton, and then S to Port Nelson and SE to Cape Henrietta Maria.

The main body of Hudson Bay is quite open, but Southampton Island borders on its N side. In the NE part of the bay lie Mansel Island and Coats Island; numerous islands lie along the E side of the bay, but the W side is almost devoid of islands except for a few in its NW part.

With the exception of its E side, Hudson Bay is remarkably free from rocks and shoals, and has an average depth of 128m.

Churchill Harbor, in the SW part of Hudson Bay, is Canada's northernmost port of major commercial importance.

Winds—Weather.—In Hudson Bay, winds from between N and W are the most common, and in addition during the summer months, S and E winds are frequently encountered. The average frequency of gales at coastal stations around Hudson Bay is 1 or 2 days per month, but over the open sea the frequency increases.

The amount of precipitation decreases from nearly 800mm at the S end of the Hudson Bay to less than 200mm in the N part. The greatest falls occur from June to September.

Fog is most frequent in late spring and in summer, especially from July to September. The frequency tends to increase to the N. The average monthly frequency of fog in summer is 3 to 4 days at Moosonee in the extreme S, increasing to 9 days at Nottingham Island, and 14 days in August at Cape Hopes Advance; in the NW part of Hudson Bay, however, it is less. Chesterfield Inlet reports an average of 4 days per month in summer.

Visibility is usually very good with winds from between W and N, provided there is no precipitation or blowing snow, but is less often very good with winds from the SW. Southeast winds are likely to bring mist or fog.

The general range of temperature over Hudson Bay ranges from -9 to 0˚C in the N part during the winter. The summer temperature ranges from 22˚C in the S part to about 10˚C in the N part.

Ice.—Foxe Channel ice seldom, if ever, enters Hudson Bay, and the ice found in the bay is for the most part winter ice, formed locally. The bay never freezes over, but ice begins to form within the smaller bays and along the shores early in October and attains a thickness of 1 to 1.5m extending off the E shore in mid-winter for a distance of 60 or 70 miles to include the islands, and off the other shores of the bay for a distance of 4 to 5 miles. Winter gales sometimes break up the shore ice and raft it to a thickness of 7 or 8m. The shore ice is generally disintegrated by the end of June, but the rafted ice remains until the end of July in the S part of the bay. However, this ice is usually S of the navigational route to Churchill, and in any event, can be avoided by holding a N course.

Within Hudson Bay, pack ice opens from the W moving in a general SE direction at an average estimated rate of about 8 miles per day. The central part of the bay does become ice-covered.

Unfavorable ice conditions between Mansel Island and Coats Island have on occasion resulted in the passage from Nottingham Island to Churchill Harbor by this route being made with great difficulty, while vessels passing E of Mansel Island experienced no difficulty.

Early arrivals at Hudson Bay should refer to the description of ice conditions off Carys Swan Nest Point on Coats Island.

Tides—Currents.—At Churchill, where long periods of tidal records have been obtained and which form the basis of the Canadian tide tables for the harbor, the tidal character is that of the open water type of tide in which the effect of the moon's distance is relatively strong, as in the Hudson Strait. This feature and the range of tide, 4.7m at springs, are about the same as at Nottingham Island. In the W entrance of Hudson Strait, but in between and to the N, there are likely variations. At the S end of Coats Island, there is a tide of 1.8m reported. At Tavani, about 200 miles N of Churchill, spring tides were determined as 3.6m, and neap tides approximately 1.8m. At Port Nelson, in the Nelson River estuary, spring and neap rise are 4.4m and 3.3m, respectively. On the E side of the bay, tides of about 0.9m are found at Port Harrison, but at the Digges Islands at the W entrance of Hudson Strait, the rise is 3.5m at springs.

The tidal undulation progresses S along the W side of Hudson Bay, and aside from tidal currents, the general circulation of water in Hudson Bay is S on the W side of the bay and N on the E side. The influx of water into the bay from Foxe Channel has a dominant SW set. A strong N set has been experienced in the SW approach to Fisher Strait. A dominant N set is apparently confined close to shore on nearing Hudson Strait, and a predominantly S set is reported along the E side of Mansel Island. In Digges Sound the N tidal current is stronger and of much longer duration than the S flood current.

Currents along the E side of Mansel Island are reported to have a dominant S set.

Depths—Limitations.—The depths in the channels between the island on the N side of Hudson Bay are deep and

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clear, with all known dangers lying in close proximity to the shores. The depths in Roes Welsome Sound are included in the principal description of that feature, beginning in paragraph 16.10.

Caution.—The National Research Council Rocket Area is located within Hudson Bay. Depending on individual rocket charactaristics, the rocket trajectory may cross at an altitude up to a maximum of about 115 miles during a period not exceeding 30 minutes from the time of launch. It is planned that most of the rockets will impact within Area A. Radar and other surveillance procedures will be in use over the area during range operations. No rocket will be launched if it is known that a ship or aircraft is likely to be endangered. Further information can be obtained through Thunder Bay Marine Communications and Traffic Services Center.

The four sub-areas are, as follows:

1. **Area A**—An area bound by lines joining the following positions:
   a. 58˚56.0'N, 94˚00.0'W.
   b. 57˚18.0'N, 94˚00.0'W.
   c. 57˚20.0'N, 91˚08.0'W.
   d. 57˚04.0'N, 90˚00.0'W.
   e. 57˚46.5'N, 90˚00.0'W.
2. **Area B**—An area bound by lines joining the following positions:
   a. 59˚46.5'N, 90˝00.0'W.
   b. 59˚04.0'N, 90˝00.0'W.
   c. 55˚46.5'N, 82˝30.0'W.
   d. 55˚46.5'N, 82˝00.0'W.
   e. 61˚46.5'N, 82˝00.0'W.
3. **Area C**—An area bound by lines joining the following positions:
   a. 55˚28.0'N, 82˚00.0'W.
   b. 58˚55.0'N, 78˚28.0'W.
   c. 63˚15.0'N, 78˚28.0'W.
   d. 63˚15.0'N, 82˚00.0'W.
   e. 60˚21.0'N, 94˚00.0'W.
   f. 58˚56.0'N, 94˚00.0'W.
   g. 59˚46.5'N, 90˚00.0'W.
   h. 61˚27.0'N, 82˚00.0'W.
4. **Area D**—An area bound by lines joining the following positions:
   a. 63˚15.0'N, 83˚00.0'W.
   b. 63˚15.0'N, 90˚00.0'W.
   c. 60˚21.0'N, 94˚00.0'W.

Islands on the North Side of Hudson Bay

16.2 Mansel Island, Coats Island, and Southampton Island lie across the N end of Hudson Bay. Of these, Southampton Island is the northernmost and by far the largest; its W coast forms the E side of Roes Welcome Sound.

The above three islands divide the sea area between the NW end of Ungava Peninsula and the mainland coast to the NW into four channels. The E of these channels, between Mansel Island and Pointe Nuvuk on Ungava Peninsula, has a least width of about 30 miles.

The channel between Mansel Island and Coats Island, which is preferred by vessels proceeding to and from Churchill Harbor, has a least width of 58 miles.

The channel between Coats Island and Southampton Island is made up of Evans Strait and Fisher Strait. The former, with a least width of about 37 miles, lies between the N end of Coats Island and the Bell Peninsula, the SE part of Southampton Island. Fisher Strait, with a least width of about 40 miles, lies between the NW side of Coats Island and the SW part of Southampton Island.

The channel between the W side of Southampton Island and the mainland, made up of Ne Ultra Strait and Roes Welcome Sound, is about 35 miles wide at its S end and about 10 miles wide at its N end.

16.3 Mansel Island (62˚00'N., 79˚48'W.) lies 35 miles offshore between Nuvuk Point and Kovik Bay and is 54 miles long and 26 miles wide. It is composed of limestone and gravel ridges, and rises to a height of 107m.

Caution.—A magnetic disturbance exists N of Mansel Island.

Swaffield Harbor (62˚23'N., 79˚42'W.), a small cove, lies on the N side of the island.

Cape Acadia, the S extremity of Mansel Island, is low and swampy, with shoals and above and below-water rocks extending a little over 0.5 mile S from it. The same shoal extends about 20 miles NW along the SW side of the island. A light, fitted with a radar reflector, is situated on Cape Acadia.

A light tower, fitted with a racon, stands on the N extremity of Mansel Island, about 4 miles NE of Swaffield Harbor.

Anchorage.—Anchorage can be taken, in a depth of 38.4m, off the N end of the island, with the light at the N extremity bearing 252˚ and E point of the island bearing 144˚. Southwest gales have been ridden out at this anchorage where the holding ground is good with very little undertow.

During NE gales, sheltered anchorage can be taken NW of Cape Acadia, in a depth of 54.9m. During NW gales, sheltered anchorage can be taken, in a depth of 27.4m, about 1.5 miles E of the cape.

The masts and funnel of a wreck, about midway along the W coast of Mansel Island, were reported to be radar conspicuous from 10 miles to the SW.

Coats Island, which lies about 57 miles NW of Mansel Island, is described in paragraph 16.5 with the principal description of the S coast of Southampton Island.

16.4 Southampton Island (64˚20'N., 84˚20'W.) has its SE end separated from the N end of Coats Island by Evans Strait. It is roughly triangular in shape, about 170 miles long in its W part, and about 190 miles wide. To the NE, the island is bounded by Foxe Channel and Frozen Strait, to the W by Roes Welcome Sound, and to the S by Evans Strait and Fisher Strait. Although the island lies close S of the Arctic Circle, by all other standards it is wholly arctic in character and is surrounded by sea ice for about eight months of the year. During the summer, the cold seas on its coasts cause low clouds and fog, and keep the mean summer temperatures around 7˚C.

In general, the NE coast of the island is steep and rugged, with deep water close offshore. The S and W parts of the island are low-lying terrain which shelves gradually to the sea and forms one of the flattest and most monotonous landscapes in the Canadian Arctic. Dangerous banks extend far out to sea

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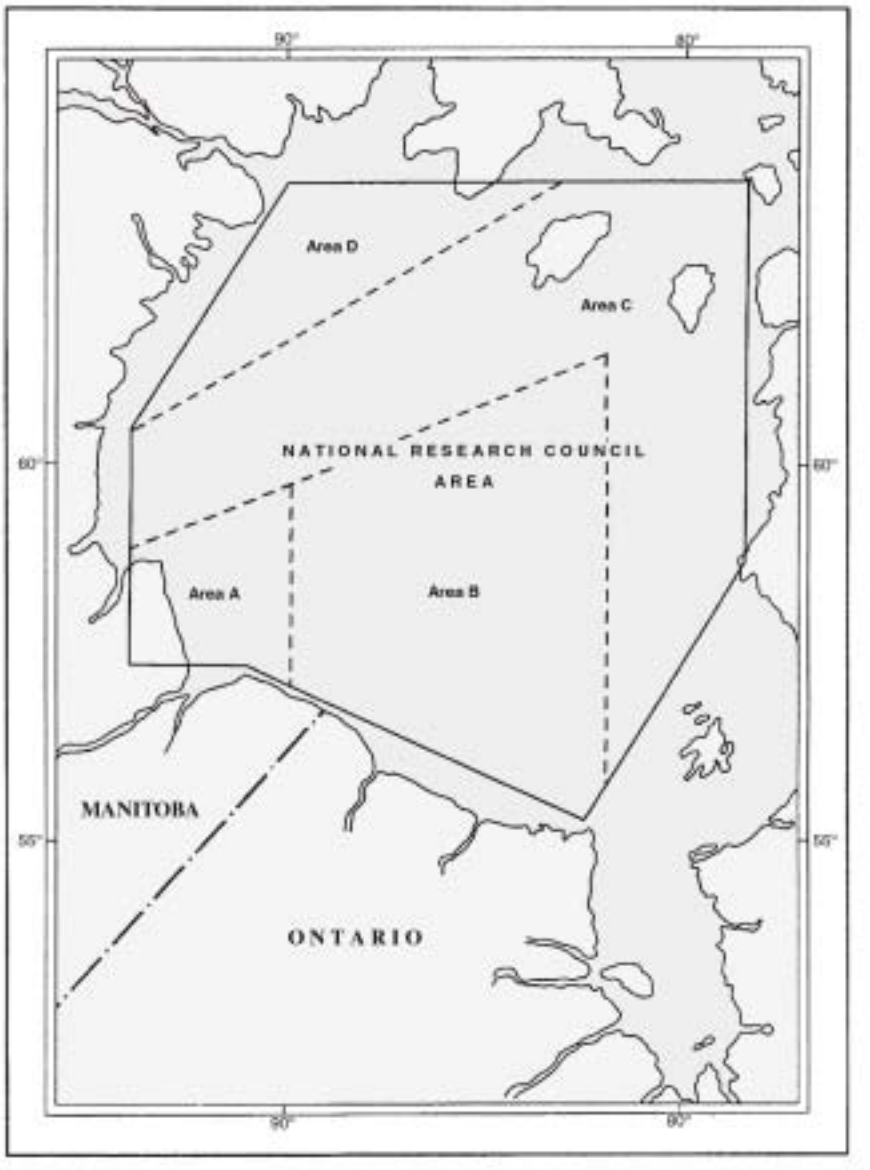

Hudson Bay National Research Council Rocket Area

from these limestone shores and broad tidal flats are exposed at LW.

The E extremity of Southampton Island lies in the W approaches to Hudson Strait, a shipping route that has been used continuously since the middle of the 17th century.

The S coast of Southampton Island extends from **Seahorse Point** (63˚47'N., 80˚10'W.) to the E, to Cape Kendall, its SW point, about 190 miles to the W. This coast is mostly low and extends inland through marshy tracts in some places, especially in its W part. Some plateaus rise to elevations of 183 to 244m in some areas and are clearly defined. The N side of the Bell Peninsula, which forms the SE part of Southampton Island, rises to slightly higher elevations than elsewhere.

Two large bays indent the S coast of the island. South Bay, with Coral Harbor at its head, lies about 85 miles WNW of Seahorse Point; Bay of Gods Mercy lies about 40 miles E of Cape Kendall.

Coral Harbor is the only indentation along the S coast where anchorage can be taken. All of the other inlets are bordered by

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shallow mudflats at their heads and are available only to small boats of light draft.

16.5 Coats Island (62˚35'N., 83˚00'W.) lies about 37 miles SSW of Bell Peninsula and is separated from it by Evans Strait. This island is mostly low and flat except for a moderately high ridge which crosses it diagonally near its N end.

Cape Pembroke (62˚57'N., 81˚54'W.), the NE extremity of the island, is a bold headland bordered by perpendicular cliffs about 152m high.

Cape Prefontaine, 10 miles W of Cape Pembroke and the N extremity of the island, is reported to be 122m high. The land behind this point is reported to be 274 to 305m high and an excellent landmark from sea.

Bencas Island (63˚00'N., 82˚40'W.), about 10 miles W of Cape Prefontaine, rises to a height of 9.1m. A least depth of 9.1m is reported to lie in the passage between this island and Coats Island. The coral bottom provides little or no holding ground.

Cape Netchek (62˚55'N., 83˚17'W.), the NW extremity of the island, is also the W side of Calanus Bay, which is bordered by drying flats on its S and W sides. Depths within this bay range from 11 to 18.3m, but a shoal patch with a depth of 2.7m lies in its central part. The head of the bay is bordered by shallow depths which extend up to 1 mile offshore.

Anchorage can be taken, in a depth of 23.8m, within the bay, about 7 miles SW of Bencas Island.

Fisher Strait, about 40 miles wide, lies between Cape Necheck and the S extremity of Southampton Island.

Carys Swan Nest (62˚10'N., 83˚08'W.), the low SE extremity of Coats Island, is bordered by a boulder-strewn bank which extends about 2 miles offshore. This point should be given a berth of not less than 5 miles when passing.

Shoran Bay, a small semi-circular indentation, lies between Carys Swan Nest and Cape Southampton, a low point about 16 miles to the W. Depths of 18.3 to 27.4m exist in the W part of this bay; the E part of this bay appears to be shoal.

A light tower fitted with a radar reflector stands on Carys Swan Nest. A racon also operates from the light tower.

Anchorage may be taken about 3 miles off the W side of the bay, in a depth of 23.8m, mud.

Walrus Island (63˚16'N., 83˚38'W.), about 50m high, lies about 23 miles NNW of Cape Netchek and has been reported to be a good radar target. A light is shown from the center of the island.

16.6 Seahorse Point (63˚47'N., 80˚10'W.), the SE extremity of Southampton Island and Bell Peninsula, is bordered by steep cliffs 91 to 122m high. A hill, about 1 mile inland, has been sighted about 20 miles offshore.

The Back Peninsula, a low rounded hill, rises to a height of 46m about 4 miles SSW of Seahorse Point, and is connected to the mainland by a narrow sandbar. Expectation Point, about 4 miles farther W, is a low rounded headland bordered on its W side by Junction Bay, a shoal inlet.

Leyson Point (63˚27'N., 81˚00'W.), bordered by shoals and drying flats which extend as far as 5 miles offshore, lies about 24 miles SW of Expectation Point.

Between Leyson Point and Native Point, about 47 miles NW, the low, marshy coast is bordered by drying flats and shoals which extend some distance seaward.

South Bay (63˚50'N., 83˚18'W.), entered between Native Point and Ruin Point, about 32 miles to the W, is indented by Native Bay on its E side. An extensive drying bank borders the shores of this latter bay.

South Bay extends about 20 miles N from its entrance points and then turns to the NE to form Coral Harbor and Munn Bay at its head.

Bear Island, a small, low island, lies NW of Prairie Point at the outer edge of a shoal, and is the SE entrance point to Coral Harbor. It is advisable to give this island a berth of about 3 miles to clear an 11m patch 2 miles NNW of it. A light tower fitted with a radar reflector stands on the N side of Bear Island.

From Ruin Point, the W entrance point to South Bay, the coast extends N for 10 miles to Renny Point and then 10 miles farther N and NNE toward Munn Bay. This part of the coast is bordered by drying flats and shoals which extend as far as 1 mile offshore in places.

Caution.—The coast between Renny Point and Sixteen Mile Brook, about 3.5 miles to the N, is charted about 0.5 mile E of its true position. Care should be exercised in this area.

The **Kirchoffer River** (64˚07'N., 83˚27'W.), about 9.5 miles NNE of Sixteen Mile Brook, is the largest river on Southampton Island.

From the mouth of the Kirchoffer River, the coast extends about 1.8 miles E to the W entrance point of Munn Bay. This unnamed point is marked by a beacon. A white cairn stands on the coast about 2 miles NE of the beacon.

Mount Scotch Tom, a large rounded ridge, rises to an elevation of 350m about 20 miles NW of Munn Bay.

16.7 Munn Bay (64˚07'N., 83˚17'W.) lies at the head of South Bay and W of Coral Harbor, with Seal Point dividing the two. The bay is wide and bordered by shoals off its N and W sides. Tern Island lies 3 miles WNW of Seal Point and is the above-water part of an extensive drying flat. The island is only 2m high and is difficult to distinguish from a distance. A beacon stands on Tern Island.

Munn Bay Light is shown on the shore about 1.5 miles NE of Tern Island. This light tower is fitted with a radar reflector. A group of five conspicuous radio masts, which are marked by red obstruction lights, stands at the head of Munn Bay, 4 miles NW of Seal Point. A similar mast lies 6 miles NW of Seal Point; about 0.5 mile farther NW, near the airport buildings, which are prominent from seaward, an aeronautical light is shown from the mast.

Anchorage.—The recommended anchorage is about 1.1 mile S of the light and 1.5 miles W of Seal Point, in a depth of 18m, clay, sand, and rock, good holding ground. A tidal current of 2 knots has been reported in the anchorage.

Anchorage, which is suitable for large vessels, can be found farther to seaward, in depths of 18 to 29m.

A landing beach, used for landing cargo, lies on the NE side of Munn Bay. A conspicuous beached hulk lies on a gravel ramp extending from the shore near this landing site.

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16.8 Coral Harbor (64˚06'N., 83˚11'W.) (World Port Index No. 1080), entered between Bear Island and Seal Point to the N, extends about 8 miles NE to its head. Depths within the harbor are very irregular, with numerous shoals and drying ledges. The E and N shores are low and marshy, and bordered by an extensive drying flat. The low, rocky W side of the harbor is bordered by submerged reefs and some low rocky islets.

Winds—Weather.—The prevailing winds blow from the N and NW, but shift to the S during the summer months. Poor visibility usually occurs during the summer, but this area is not especially foggy.

Ice.—Ice usually closes the harbor to navigation from October 15 until July 15. Pack ice has drifted into the harbor in the late summer months, but this rarely occurs.

Depths—Limitations.—The recommended track leading into the harbor has a least depth of 7m. This channel leads E of Guard Rock, a danger which dries 1.2m, lying 1.5 miles ESE of Seal Point.

A 4.9m patch lies 1 mile N of Guard Rock.

Aspect.—Coral Harbor Settlement lies on a bluff point on the NW side of the harbor, and consists of a Hudson's Bay Company, some municipal buildings, and two church missions. A beacon stands on a rocky islet 0.5 mile ESE of the settlement. The spires of Anglican and Roman Catholic Churches in Coral Harbor settlement are prominent from the harbor. A sunken wooden barge serves as a jetty for small boats. All cargo is handled at the anchorage.

Pilotage.—An Inuit pilot can be obtained by calling Coral Harbor coast radio station or the Hudson's Bay Company's private radio station in the settlement. The pilot boards off Bear Island.

Anchorage.—Anchorage is available about 1 mile ESE of Coral Harbor settlement, in a depth of 13m. The holding ground is good, but the anchorage is exposed, except from the W.

Caution.—There is a considerable magnetic anomaly in the vicinity of Coral Harbor.

It has been reported that the beacon situated on Tern Island does not exist (1978); the condition of other navigational aids is not known.

The coast between Ruin Point and Cape Low, about 59 miles SW, is very low and marshy, rising more than 20 miles inland to heights of 122 to 152m. This whole section of coast is bordered by a drying flat and shoal water which extends several miles offshore.

16.9 Bear Cove Point (63˚36'N., 84˚05'W.), about 17 miles SW of Ruin Point, forms the E side of Bear Cove, a shallow indentation, most of which dries.

Hut Point, a low insignificant projection, lies about 20 miles SW of Bear Cove. A range of hills known as The Points extends in a NW-SE direction across the base of the peninsula that terminates in Cape Low, about 24 miles SW of Hut Point. From the E, these hills appear as five peculiar shed-like hills.

Bay of Gods Mercy (63˚30'N., 86˚10'W.), entered between Cape Low and Cape Kendall, about 56 miles NW, recedes about 25 miles NE to its head. The shores of the bay are very low and it is reported to be fouled by numerous shoals. The N shore is bordered by an extensive drying flat. A plateau running roughly parallel to the E shore, about 2 to 3 miles inland, rises to heights of 61 to 91m. The Boas River, which is accessible only to small boats, discharges into the NE part of Bay of Gods Mercy through a broad, marshy flat with numerous channels.

Cape Kendall (63˚36'N., 87˚12'W.) is the SW extremity of Southampton Island and the SE entrance point to Roes Welcome Sound, which separates the island from the mainland to the W. This low cape is bordered by drying flats which extend 1 to 2 miles offshore. A group of reefs, some of which dry, lie about 6 miles SSW of the cape. A bank, with a depth of 12.8m, which has not been examined, lies about 20 miles S of Cape Kendall.

Roes Welcome Sound—East Side

16.10 Roes Welcome Sound (64˚00'N., 87˚30'W.) is about 150 miles long, extending from Hudson Bay at its S end to Repulse Bay at its N end. The S end of the sound is known as Ne Ultra Strait. For the purposes of this sector, the N entrance of Roes Welcome Sound lies between Cape Munn, the N extremity of Southampton, and Beach Point, about 19 miles NNW. The sound varies in width from 10 miles near its N end to over 30 miles near its S end. Wager Bay leads off the W side of Roes Welcome Sound, about 100 miles N of Cape Kendall.

There are general depths of 91.4 to 146.3m in Ne Ultra Strait, shoaling gradually to depths of 18.3 to 54.9m as far N as a line of bearing between Cape Munn and the mouth of the Snowbank River, 40 miles to the W.

Ice.—The strong tidal currents in Roes Welcome Sound tend to keep the ice in motion throughout most of the year; even in the winter, there is usually some open water near the middle. On a still day, with neap tides, the sound may freeze right across, only to break up again when a strong wind blows.

Roes Welcome Sound is open before Repulse Bay and should normally be navigable from early August to the end of September, but throughout the summer, drift ice may be expected in it. The supply vessel for Repulse Bay proceeds N via Roes Welcome Sound, the passage usually being made about the last week in August or the first week in September.

Tides—Currents.—The currents are strong in the N half of Roes Welcome Sound. The tidal undulations from the N and S meet opposite Wager Bay. Thus, with a rising tide in this area, a N current will be found in the S part of the sound, and a S current in the N part. With a falling tide, the directions will be reversed.

16.11 The W coast of Southampton Island, between Cape Kendall at its S end, and Cape Munn at its N end, forms the E side of Roes Welcome Sound. This coast is relatively low, with no distinguishing landmarks, and shoal water extends 2 to 3 miles offshore, while limestone reefs lie much farther out. The land behind the shore rises in a succession of ridges, each a few meters higher than the preceding one. Very little vegetation grows on these ridges, but in the wide depressions between them, there is a profusion of grasses and other arctic plants on the ground surrounding the many lakes and ponds. There is no shelter on this coast, except to a very limited extent for small boats in one or two bays and river entrances.

From Cape Kendall, the coast extends about 40 miles NE to Ell Bay. Near Cape Kendall, the tidal flat is reported to be

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about 3 miles wide, and off Ell Bay shallow water extends many miles offshore. A limestone reef, reported awash at LW, lies about 17 miles W of Ell Bay. Another reef is charted about 12 miles NNW of this reef, but its position is doubtful.

From Ell Bay, the coast extends about 10 miles N to Anchor Cove and then an additional 65 miles N to Battery Bay. The Murray River enters the sound about midway along this section of coast. For some miles N of Anchor Cove ,the coast consists of low bluffs, which increase to moderate heights farther N.

Battery Bay (65˚21'N., 86˚07'W.), protected by shoals off its N entrance, provides sheltered anchorage to small craft in depths of about 3m at LW. Otherwise the bay is very exposed. A small well-marked limestone bluff marks the S entrance point to the bay; the main ridge is higher here than farther N.

From Battery Bay, the coast extends about 40 miles N and NNE to Cape Munn, the N extremity of Southampton Island. This part of the coast consists of raised beaches with occasional outcrops of limestone. Several streams flow at right angles to the coast. Inland, the land rises to over 30m high with very gentle even slopes. The beaches consist of shingle with scattered boulders. The tidal flat does not appear to extend far offshore, but there are many small spits and shoals, marked by tide rips. At Cape Munn, the coast is low and numerous beach lines are evident.

Cape Frigid (66˚05'N., 85˚05'W.), about 15 miles NE of Cape Munn, is the NE entrance point of Roes Welcome Sound.

16.12 West side.—The W side of Roes Welcome Sound forms part of the E coast of the District of Keewatin. From Cape Fullerton, the SW entrance point to Roes Welcome Sound, the coast extends about 90 miles NE and NNE of Cape Dobbs, the SE entrance point to Wager Bay. This low coast is bordered by islets, rocks, and shoal water. It is composed mostly of solid rock, often in the form of knobby hills which seldom rise to heights of more than 6 to 12m near the shore. Farther inland, slightly higher similar hills are visible from seaward.

Between Cape Fullerton and Whale Point, about 20 miles NE, the coast is mostly barren, consisting of rugged red and gray granite rocks, with the strata running in a NW-SE direction, and with many lakes inland. A number of small rocky islets lie scattered along the shore fronted by an extensive tidal flat.

Whale Point (64˚09'N., 88˚06'W.) is not high, but rises somewhat above this otherwise low coast. A bank, with a depth of 16.5m, is reported to lie about 6 miles ESE of the point. Whale Point is reportedly charted 4 miles SSW of its correct position.

Anchorage may be taken about 14 miles NE of Cape Fullerton in position 64˚05'30"N. The cove here is about 0.1 mile wide and almost 4 miles long, with depths of 7.3 to 11m, sand and mud. The Borden River, with a succession of rapids and deep pools, empties into the inlet. The tidal range here has been reported to be about 4.1m. In the vicinity, the shores have a very rugged appearance, with many ridges of primitive rock running far out into sea in an E-W direction.

Mistake Creek (64˚10'N., 88˚04'W.) enters the sea about 6 miles NNE of Whale Point. The area around this creek consists of low ridges of rock, 4.6 to 30.5m high, covered with shattered boulders. The highest point in the immediate vicinity is a hill, 40m high, almost vertical on its E side facing the sea. The ridges about 3 to 4 miles inland attain elevations of 27 to 31m. Above 10 miles inland, hills about 152m high can be seen. The water offshore is shallow.

Yellow Bluff (64˚34'N., 87˚38'W.) is the name of a small promontory about 21 miles NNE of Mistake Creek. This section of coast is higher, rising 30 to 61m.

The name originates from the color of the rock at this point which is not higher than the surrounding land, but falls with a rather steep slope. Between Yellow Bluff and Kamarvik Harbor, about 21 miles NNE, the low coast is bordered by reefs, with depths of less than 1.8m, which extend up to 3 miles offshore.

16.13 Kamarvik Harbor (64˚41'N., 87˚27'W.) appears to have an entrance about 1 mile wide, but it is fouled by many islets. Kamarvik Creek discharges into the head of the harbor.

By keeping to the E side of the entrance into Kamarvik Harbor, it is possible for small craft with a draft of up to 2m to pass in at any stage of the tide. The depth in the channel has not been measured, but it is thought to be not less than 3.7m in any part. The inner harbor has depths of over 15.2m and is commodious for small craft.

The coast between Kamarvik Harbor and Nuvuk Point, about 30 miles NNE, is bordered by many off-lying islets and shoal water. The land in this vicinity does not exceed 9 to 12m near the coast. From Nuvuk Point, the coast extends about 6 miles NNW to Cape Dobbs, the SE entrance point to Wager Bay. This part of the coast and hinterland is low, with small, very bare rocky hills seldom more than 15m high. Most of this shore is solid rock, with tidal boulder flats in the bays and numerous off-lying islets, rocks, and reefs.

Wager Bay

16.14 Wager Bay (65˚18'N., 87˚13'W.), entered between Cape Dobbs and Cape Montague, about 9 miles NW, extends about 90 miles W and NW to its head. The bay varies in width from about 2 miles in the narrows near the entrance to a width of about 20 miles in its central part. There are reversing falls at the head of the bay, with Ford Lake lying beyond them. Most of the land surrounding the bay is fairly high, particularly on the SW side where cliffs rise to heights of 229 to 290m, and hills rise to heights of 518m within 2 to 3 miles of the shore. The land on the NE side of the bay is somewhat lower, but attains an elevation of about 305m in places within 1 to 2 miles of the shore.

16.15 Wager Bay Narrows.—From Cape Dobbs, the coast extends W for about 25 miles to Handkerchief Point and forms the S shore of the narrows at the entrance to the bay. The coast is low at Cape Dobbs, but rises gradually to a height of about 152m close E of Handkerchief Point. Along the N side of the entrance the slopes are steep, but elevations do not exceed 31m. A short distance inland the hills rise to an elevation of about 122m.

Ice.—Several reports indicate that because of the strength of the currents the narrows are seldom frozen over; however, great quantities of ice in motion are a serious danger to vessels.

Tides—Currents.—The tidal currents run with great strength in Wager Bay Narrows and, according to some reports, at a rate of 6 to 7 knots. The water continues to flow out of the bay for some time after LW on the coast. There are many whirlpools and eddies, which the Eskimos claim are mainly present toward the S side of the channel when the currents are at their strongest. A weak current, reported to be 4 knots or less, is found toward the N side.

Depths—Limitations.—There are general depths of about 45.7 to 73.2m in Wager Bay Narrows. Except for two sunken rocks close to the N shore, about 1.7 miles W of Cape Montague, and two islets near the same shore, about 11 miles farther W, the narrows appear to be free of dangers.

16.16 Southwest side of Wager Bay.—Handkerchief Inlet (65˚16'N., 88˚02'W.) extends about 3 miles SSE from a position close W of Handkerchief Point. The mouth of this inlet lies W of that part of the main channel where the currents run most strongly and it might be used as a temporary anchorage for small craft waiting for the current to turn. Good shelter is provided. Deep water lies within 46m of the inlet head where a small river enters.

From Handkerchief Inlet, the SW shore extends about 25 miles W to a wide bay fronted by the Paliak Islands. These islands rise to a maximum height of 61m at their W extremity. In the vicinity of these islands, the coast rises to a height of about 366m, and to a height of 610m about 6 to 7 miles inland. Near these islands the coast turns abruptly to the NW to the head of Wager Bay and consists of steep cliffs rising inland to mountainous terrain. Deep water is reported to lie close offshore along this section of coast.

16.17 Northeast side of Wager Bay.—From the W entrance of the narrows, the NE side of Wager Bay extends 30 miles NW to Tikilak Point, the S entrance point to Douglas Harbor, and then 30 miles farther NW to Bennet Bay at its head.

Nuvudlik Island (65˚47'N., 88˚14'W.), about 8 miles NW of the W entrance to the narrows, is one of a large group of offshore islands and islets known as the Savage Islands. These low islands are almost barren. Soundings on the SSW and W sides of the group are very irregular and contain several dangerous shoals. Vessels should give these islands a wide berth when passing. The mainland N of these islands consists of a series of low rounded hills rising to heights of about 91m.

Douglas Harbor (65˚40'N., 88˚50'W.), which has an average width of 2 miles, extends about 11 miles E to the Piksimanik River at its head. The peninsula forming the S side of the harbor is low, whereas the N side is bordered by round hills, 152m high, increasing to heights of 274 to 305m about 1 mile inland. Mackay Bluff rises to a height of 213 to 244m on the N side of the harbor just within the entrance.

A sunken rock is charted about 3.5 miles W, and a 3.7m shoal, about 4 miles SSE, of Tikilak Point. Drying reefs are reported to exist in the entrance to Douglas Harbor.

A very rocky beach fringes Douglas Harbor. The tidal range is about 5m. Sheltered anchorage can be taken just inside the harbor entrance on the S side, with good holding ground of rock and gravel. Small craft can reach the head of the harbor at LW by steering a mid-channel course or favoring the S shore.

Northwest of Douglas Harbor the coast appears to be somewhat lower, although hilly in some parts.

16.18 The **Abruyuk Islands** (65˚45'N., 89˚15'W.), lying up to 2.5 miles offshore and 12 miles NW of Tikilak Point, are low, bare rocks no more than 31m high.

The NW shore of Wager Bay terminates in Bennett Bay, which is divided into two branches at its upper end by a peninsula. There are several low islands in this bay and its approaches, and both branches are shallow with tidal flats at their heads.

North of Bennett Bay, the coast consists of parallel ridges; to the NW, the terrain becomes extremely rugged, rising to heights of up to 427m.

Between Bennett Bay and the reversing falls at the head of the SW side of Wager Bay, there is a large peninsula made up of conical, steep-sided hill,s ranging in height from 30 to 122m in the vicinity of the falls to about 213m farther E.

Reversing Falls (65˚53'N., 90˚27'W.), at the head of Wager Bay, are the most striking physiographic features in this area. They are the normal type of reversing falls, with the water flowing N into Ford Lake for about 4 hours, followed by slightly less than 1 hour of SW, and then 6 hours of rather faster outflow. The channel is about 45m wide, broadening at the time of HW. It is necessary to pass through at one of the periods of SW.

Ford Lake (65˚54'N., 90˚32'W.) is about 0.5 to 1 mile wide and about 17 miles long, extending 6 miles E from the reversing falls and 11 miles W. The Brown River, which is not navigable by craft of any size, flows into the W end of Brown Lake where it is reported to be shallow. A former Hudson's Bay Company post was situated on the shore of a small inlet on the N side of Ford Lake, about 3 miles from its W end. Anchorage, with good holding ground, was available near the post. The land in the vicinity is much lower than it is farther E. The tidal range in the lake is reported to vary from 0.4 to 0.9m.

Roes Welcome Sound—West Side

16.19 The W side of Roes Welcome Sound extends about 65 miles NNE from Cape Montague to Beach Point. This sector of coast is low and hilly and marked by numerous lakes and islets. Rocks and shoals border this coast and extend 1 to 4 miles offshore especially along the SW part, and should be given a good berth when passing.

Berthie Harbor (65˚20'N., 87˚20'W.), a small inlet close N of Cape Montague, has a hill shaped like a flat-topped cone to the W of it.

Bury Cove (65˚27'N., 87˚04'W.), a wide-mouthed bay 10 miles NE of Cape Montague, provides anchorage for small craft though it is rather exposed at HW. Care should be taken when entering because of the many sunken rocks and dangerous reefs offshore. Low ridges, not more than 4.6m high, rise in the vicinity of the cove, especially on the N side. A ridge, about 53m high, parallels the coast, the side facing the sea being steep and cliffy.

From Bury Cove to the mouth of the Snowbank River, about 32 miles NNE, elevations near the coast nowhere exceed 46m.

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The **Snowbank River** (65˚54'N., 86˚22'W.) runs at the SW foot of a scarp about 30m high, while the land to the NE rises to 46m. With care, small craft can enter the mouth of this river.

Panalik Point (66˚03'N., 85˚56'W.), a prominent low headland, lies about 15 miles NE of the Snowbank River; Beach Point lies about 8 miles farther N. Small craft can shelter in the lee of the latter point at times. The water is deep to within 90m of the shore, but little protection is provided.

Beach Point (66˚12'N., 85˚52'W.) is the NW entrance point of Roes Welcome Sound and the W entrance point of Repulse Bay.

Cape Fullerton to Eskimo Point

16.20 Cape Fullerton (63˚59'N., 88˚44'W.) is the W entrance point of the S entrance of Roes Welcome Sound and is also the N entrance point of Bernheimer Bay. A reef extends about 10 miles SE from the cape; several dangerous sunken rocks lie 1 to 2 miles beyond the SE extremity of the reef.

The coast between Cape Fullerton and Eskimo Point, about 250 miles SW, which forms the N portion of the W side of Hudson Bay, is rocky, indented by numerous inlets and bays, and bordered by many islands, islets, and rocks.

Depths—Limitations.—Soundings along this section of coast are sparse and can best be seen on the Canadian chart. Navigation is endangered by several off-lying reefs, the outermost of which extend about 12 miles SE from Cape Fullerton; about 7 miles E from Quartzite Island, which lies about midway between Cape Fullerton and Eskimo Point; and about 7 miles E from Sentry Island, which lies 4.7 miles NNE of Eskimo Point.

Caution.—Numerous instances of magnetic disturbances have been reported off the coast between Cape Fullerton and Eskimo Point. It has been reported that these disturbances are considered to be caused not so much by isolated local conditions as by the fact that this part of Hudson Bay lies within an area in which the horizontal component of the earth's magnetic field is sufficiently reduced so as to render the magnetic compass unreliable.

16.21 Bernheimer Bay (63˚58'N., 88˚56'W.), 12 miles long and narrow, is entered between Cape Fullerton and Poillon Point, about 7 miles WSW. Many small islands lie within the limits of this bay.

Fullerton Harbor (64˚00'N., 88˚58'W.) is formed by a number of islands lying off the N shore of Bernheimer Bay. The small harbor, which is entered from the W through a narrow entrance with a depth of 4.3m, can only accommodate three small vessels. Little is known concerning the depths in the approaches to Bernheimer Bay or within the bay itself.

Between Poillon Point and the E entrance point of Daly Bay, about 13 miles to the W, the coast is indented by several inlets and bays containing many islands, while the approaches are fouled by rocks and shoals.

Daly Bay (63˚56'N., 89˚39'W.) is 9 miles wide at its entrance and extends inland for about 17 miles. Numerous islands lie within this bay, which has not been surveyed.

Walrus Island (63˚57'N., 89˚35'W.), the only named island in the bay, lies about 3.5 miles WNW of the E entrance point.

The **Bailey Islands** (63˚53'N., 89˚50'W.), a cluster of small islands, lies 2 miles S of the W entrance point of Daly Bay.

Winchester Inlet (63˚52'N., 89˚54'W.), entered between the W entrance point of Daly Bay and an unnamed point about 8.5 miles SSW, extends about 11 miles NW. A good harbor is reported to exist on the NE side of the inlet, about 3 miles inside the entrance. The entrance to this inlet is fouled by many submerged rocks and shoals, and only vessels with local knowledge should attempt to enter.

From the SW entrance point of Winchester Inlet, the coast extends about 12 miles SSW to Cape Silumiut, the NE entrance point of Chesterfield Inlet. The intervening coast is bordered by low hills which extend well into the interior. A wide belt of low rocky islands extend offshore, seaward of which there is a labyrinth of sunken reefs. Beyond these reefs the bottom is very uneven so that there is danger of a vessel grounding before sighting the low coastline.

Whitney Inlet (63˚47'N., 90˚04'W.) lies about 2 miles SW of Winchester Inlet and is fouled by numerous submerged rocks and islands off its entrance. Local knowledge is required to enter.

Chesterfield Inlet

16.22 Chesterfield Inlet (63˚24'N., 90˚38'W.) is a long, narrow indentation which extends about 112 miles in a WNW direction to Chesterfield Narrows where it joins Baker Lake. The bare, rocky slopes of the inlet rise to heights of 30 to 61m. The inlet contains several harbors for small vessels, but none for large vessels. Large vessels use the anchorage off Chesterfield Inlet settlement near the SW entrance point. The waters of the inlet are largely unsurveyed and should be navigated with great caution.

Chesterfield Inlet entrance lies between Cape Silumiut and Jaeger Point, about 22 miles to the SW, but the navigable channel is only about 2.5 miles wide because of the islands and reefs that encumber the approaches.

Tides—Currents.—There is a heavy tidal current up Chesterfield Inlet which just reaches the E end of Baker Lake.

In the channels on either side of the Bowell Islands, rapids form at ebb tide; these channels must be followed with the flood.

The range of tide in Chesterfield Inlet varies from 6.1m between the mouth and 30 miles within it, to 3m at a position 3 miles below Baker Lake. At the E end of Baker Lake the range is less than 0.1m. The tidal time lag between Hudson Bay and Baker Lake is 5 hours 15 minutes. High water at Chesterfield Narrows extends over a 3 or 4 hour period commencing at about the time of HW at Churchill. The narrows should be navigated at SW, which occurs about 30 minutes before the beginning of HW and again about 3 hours after the beginning of HW. The current sets W between the slacks.

The Canadian chart indicates a 4.5 knot flood current setting W through Chesterfield Narrows and a 6.7 knot ebb current setting E.

Depths—Limitations.—In the entrance to Chesterfield Inlet, S of Promise Island, there are charted depths of 36.6 to 91m. A depth of 29m can be maintained along the recommended route as far W as Cross Bay (63˚54'N., 93˚30'W.), and 20m from there to Chesterfield Narrows, where a rock shelf

with depths of 2.1 to 3m obstructs the channel. Vessels with drafts of up to 4.6m have sailed up Chesterfield Inlet and crossed Baker Lake. The track usually followed through Chesterfield Narrows leads over a least charted depth of 4.9m.

Caution.—A magnetic disturbance has been reported to exist between Coats Island and the mainland in the vicinity of Chesterfield Inlet. It is dangerous to approach this coast during foggy weather if using a magnetic compass.

A dangerous area, the position of which is doubtful, lies centered about 12 miles SE of Cap Silumiut.

A small detached 7.3m shoal lies about 19 miles SSW of Cape Silumiut.

16.23 Northeast approach to Chesterfield Inlet.—Numerous islands, islets, rocks, and shoals lie in the NE approach to Chesterfield Inlet between Cape Silumiut and Jaeger Point, about 22 miles to the SW. Dangerous reefs exist about 10 miles offshore in this approach.

16.24 South approach to Chesterfield Inlet.—Fairway Island (63˚15'N., 90˚34'W.), about 11m high, lies about 6.5 miles SSE of Jaeger Point. When viewed from seaward, the island may appear as three distinct humps. A wooden beacon, consisting of a mast surmounted by a barrel with a triangular framework base, stands on the middle hump. The condition of the beacon on Fairway Island is unknown, as it is no longer maintained.

Aulatsivik Point (63˚15'N., 90˚42'W.), marked by a conspicuous ridge of dark rock, lies about 3 miles W of Fairway Island.

Sakpik Island (63˚17'N., 90˚40'W.), which consists of two hills joined by a narrow neck of land, lies about 2 miles NW of Fairway Island. The narrow passage between Sakpik Island and Fairway Island should not be attempted without local knowledge.

Fox Trap Island (63˚18'N., 90˚42'W.), connected to the mainland to the W by a drying flat, lies about 0.5mile NNW of Sakpik Island. Numerous rock cairns lie on the N end of the island.

Fish Bay, fouled by numerous shoal patches, lies NW of Fox Trap Island. The N entrance point to this bay forms the SW entrance point to Chesterfield Anchorage.

Finger Point (63˚20'N., 90˚40'W.), the E entrance point to the anchorage, lies about 1.7 miles farther ENE. Shoals extend as far as 1 mile E and SE from this point which should be given a wide berth when passing. Tide rips occur off the point during large tides.

16.25 Chesterfield Inlet Settlement (63˚20'N., 90˚42'W.) lies on the N side of Chesterfield Anchorage and consists of a Hudson's Bay Company store, a port office, a weather station, a hospital, and a church mission.

No berthing facilities are available. Vessels handle cargo at the anchorage.

Ice.—Ice usually begins to break-up the latter part of June and early in July, while freeze-up usually takes place during the last two weeks of November.

Tides—Currents.—Spring tides rise 4.3m and neaps tides rise 3.2m off the settlement.

Aspect.—Two radio masts on the N shore of the harbor, about 1 mile W of Finger Point, are conspicuous.

The belfry of a Roman Catholic Mission Church, about 0.3 mile ENE of the radio masts, is easy to identify from S.

A Roman Catholic Mission hospital, a grey building with a cross on the roof, also stands on the N shore and is conspicuous. Some buildings, with aluminum coverings, situated on high ground, are also prominent.

Anchorage.—Anchorage can be taken about 0.5 mile S of the Hudson's Bay Company store, in a depth of 15m, sand and gravel, fair holding ground. When winds are from the S through SE to E, vessels are advised to heave up and proceed to sea or seek shelter in Chesterfield Inlet.

Directions.—When approaching Chesterfield Inlet from the S, a course of 000˚ should be steered to pass 3 miles E of Fairway Island. Promise Island and the buildings at the settlement should be sighted from this position. When the N end of Fairway Island is abeam to port, course should be altered to 301˚ with the masts on the W side of Chesterfield Anchorage ahead. When Finger Point is abaft the starboard beam, course should be altered to starboard to bring the conspicuous hospital building with a cross on the roof ahead and anchor about 0.5 mile S of the Hudson's Bay Company store. Under no circumstances should a vessel close either of the entrance points to Chesterfield Anchorage.

Chesterfield Inlet Entrance

16.26 Chesterfield Inlet's entrance may be considered to lie between Cape Silumiut and Jaeger Point, about 22 miles SW. Only that part of the entrance which lies between Rockhouse Island and Jaeger Point, about 5.2 miles to the S, is of interest to shipping and will be the only part described. The navigable entrance leading into the inlet is only 2.5 miles wide and lies between the Wag Islands and Jaeger Point. Depths in this latter passage, seaward of the fringing shoals, range from 18.3 to 109.7m.

Caution.—Some of the waters adjacent to the shipping channels have not been surveyed. They should not be entered without local knowledge.

Jaeger Point (63˚21'N., 90˚41'W.), fringed by a drying reef and a shoal which extends 0.5 mile ENE, lies about 1.2 miles NNW of Finger Point. A detached 0.5m shoal lies 1 mile NW of the point.

Promise Island (63˚21'N., 90˚32'W.), wedge-shaped with a high W side, lies about 4 miles E of Jaeger Point. The E and NE sides are bordered by extensive drying rocky flats strewn with boulders. A beacon constructed of a black and white tripod surmounted by a mast, is erected on the SW side of the island.

The **Wag Islands** (63˚23'N., 90˚38'W.), two in number, lie on a drying reef about 2.5 miles NE of Jaeger Point. The S end of the S island is marked by an inconspicuous cairn. One large and several small drying ledges lie off the E and NE sides of these islands.

Rockhouse Island (63˚28'N., 90˚41'W.), a very large island rising to a height of 43m in its central part, lies 2.5 miles NNW of the Wag Islands. Pintail Island, small and low, lies at the

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outer extremity of a drying ledge which extends about 1.2 miles from the SE extremity of Rockhouse Island.

Akreavenek Island (Sandpiper Island) is the above-water part of a drying ledge which lies about 0.3 mile S of Rockhouse Island.

Hanbury Island (63˚32'N., 90˚52'W.), about 8 miles long and 4 miles wide, lies close NW of Rockhouse Island and rises to an elevation of about 31m. A reef, awash, which breaks conspicuously in heavy seas, and rocks and shoal depths of less than 10m, lie up to 1.3 miles off its SW shore.

Severn Harbor (63˚34'N., 90˚56'W.) lies N of the NW end of Hanbury Island and is formed by the mainland and the islands which stand N of Hanbury Island.

16.27 East end of Chesterfield Inlet.—A shoal bank, with a least depth of 0.5m, extends almost 1 mile offshore on the SW side of Chesterfield Inlet between Goose Point, about 2.5 miles NW of Jaeger Point and Ptarmigan Island, about 2.7 miles farther NW. A small drying area lies 0.5 mile N of Goose Point.

Observation Point (63˚28'N., 91˚00'W.) lies on the SW side of the inlet, about 11 miles NW of Jaeger Point. Ellis Island lies close NW of Observation Point; Moore Island lies 1.5 miles farther WNW.

Sheltered anchorage may be taken, in a depth of 12.8m, on the S side of Ellis Island.

16.28 West end of Chesterfield Inlet.—The **Boswell Islands** (64˚00'N., 94˚00'W.) are a group of islands which almost block the W end of the inlet. Chesterfield Inlet leads into Baker Lake at Chesterfield Narrows, S of the Boswell Islands, about 112 miles above the seaward entrance of the inlet. There is also an outlet N of the Boswell Islands.

Chesterfield Narrows (64˚00'N., 94˚18'W.) lies between Ice Breaker Point, the SW extremity of the westernmost Boswell Island, and Ice Cutter Point, on the mainland to the S. The navigable channel through the narrows has a least width of 0.3 mile.

Ice Breaker Islet (64˚00'N., 94˚19'W.), 4.6m high, lies on the N side of the narrows, about 0.2 mile W of Ice Breaker Point.

Baker Lake (64˚07'N., 94˚45'W.) is a fresh water lake about 50 miles long ,with an average width of 15 miles. The shores are bordered by barren rocky hills, 91 to 122m high. The lake, with the exception of a portion of the SE end, has not been surveyed, but vessels bound for the settlement at its NW end have crossed without incident. A number of islands divide the SE end of the lake into two navigable passages known as South and North Channels.

Christopher Island (64˚04'N., 94˚30'W.), about 10 miles long and deeply indented along its shores, lies with Grebe Point, its SE extremity, about 0.8 mile W of Ice Breaker Point.

A beacon range on Burial Point, having orange structures and diamond-shaped topmarks, in line astern bearing 101˚, leads clear of the dangers S of Grebe Point.

South Channel, which passes between Christopher Island and the mainland to the S, is fouled by numerous rocks and shoals near it's SE end. Only vessels with a draft of 3m and less can use this channel. Local knowledge is necessary.

North Channel, the alternate and recommended passage leading into Baker Lake, passes along the E and N sides of Christopher Island. This route is free of hazardous shoals and has a least depth of 7m. The S entrance to this channel lies between Grebe Point and Kennedy Point, about 0.7 mile ENE.

Bertrand Point, about 1.8 miles NNW of Kennedy Point, marks the SE extremity of 1 mile long peninsula extending SE from the E side of Christopher Island. Range beacons, in line bearing 358˚30', are situated on this point.

Bannerman Island (64˚02'N., 94˚19'W.), about 35m high, lies 0.5 mile NE of Bertrand Point. Two beacons, in line bearing 027˚, stand on the SE end of the island.

Low Point (64˚03'N., 94˚23'W.), about 2 miles NW of Bertrand Point, is the N end of a small peninsula extending from Christopher Island. A beacon stands on Low Point.

Pilon Island (64˚04'N., 94˚22'W.) lies 1 mile NW of Bannerman Island. Caution Point is its SW extremity and Barbour Point is its NW extremity. Two beacons on the N end of this island, in line bearing 156˚ astern, lead through Polaris Narrows.

16.29 Regina Narrows (64˚03'N., 94˚22'W.) lies between Dean Islet, about 0.4 mile E of Low Point, and Caution Point on Pilon Island. The navigable channel through these narrows is only 0.1 mile wide and maintenance of a mid-channel course is essential to clear the shoal extending SW from Caution Point. A least depth of 6.5m exists in Regina Narrows.

McGill Islet and Ptarmigan Islet, both small and low, lie on the W side of the channel about 1 mile W of Pilon Island.

Polaris Narrows (64˚06'N., 94˚24'W.) is the navigable passage through a wide shoal area lying between Peck Point, the N extremity of Rio Island and Red Point, the SE extremity of an unnamed island 2 miles W of Peck Point. Rio Island lies close E of Pilon Island.

There is a least depth of 7.8m on the recommended track and it is essential to adhere to the range beacons on Barbour Point to clear the shoals off Red Point.

North Channel is entered from Polaris Narrows between Bowser Point, 1 mile NNW of Red Point, and Jessiman Islet, 0.7 mile to the NNE.

Directions—North Channel.—Vessels proceeding to North Channel from Chesterfield Narrows should maintain a mid-channel course past Ice Breaker Islet on a course of 285˚ until the beacons on Bertrand Point are in line bearing 000˚ ahead, and proceed on this course.

Stay on this alignment until the leading beacons on Bannerman Island are in line ahead bearing 029˚30'. When the channel between Bertrand Point and Bannerman Island is open, a mid-channel course of 317˚ should be steered for Regina Narrows.

When Barbour Point and Peck Point are in line, alter course to 354˚. Continue on this course for 1.3 miles at which distance a course of 336˚ should be steered to pass through Polaris Narrows with the beacons on Barbour Point in line bearing 156˚ astern. Extreme care should be taken to adhere to this range in order to clear the rocks and shoal water E of Red Point. The conspicuous white boulder on the point N of **Chain Islet** (64˚08'N., 94˚27'W.) provides a good steering mark while passing through Polaris Narrows.

Once clear of the narrows, Bowser Point can be rounded at a distance of about 0.4 mile and a mid-channel course can then be steered to the W which leads into Baker Lake.

16.30 Baker Lake Settlement (64˚19'N., 96˚02'W.) and its small harbor lie at the NW end of Baker Lake. The settlement consists of a Hudson's Bay Company store, three church missions, a post office, and some government buildings.

No berthing facilities are available; vessels anchor about 0.5 mile offshore abreast of the settlement to handle cargo.

Baker Foreland (62˚55'N., 90˚49'W.), which lies about 27 miles S of the S entrance point of Chesterfield Inlet, is the SE extremity of the land separating that inlet from Rankin Inlet. This headland consists of two hills, and is easily identified from seaward, being the only high land in the vicinity. Drying ledges extend up to 2 miles offshore.

Baird Bay, a wide, shallow bight, lies between Baker Foreland and Scarab Point, the NE entrance point of Rankin Inlet, about 17 miles SW. Several drying shoal patches, the positions of which are approximate, lie in the approaches to Baird Bay.

Rabbit Island, 20m high, lies about 2 miles E of Scarab Point.

Hazy Islet lies 7.5 miles E of Rabbit Island and is the above-water portion of an extensive rocky shoal.

Marble Island (62˚40'N., 91˚07'W.), 88m high, lies in the middle of the approach to Rankin Inlet, with its W extremity about 7 miles S of Rabbit Island. This whitish-gray colored island is the highest land in the approaches to Rankin Inlet. Quartzite Island lies close off the E end of Marble Island and is joined to it at LW. A 10m patch lies about 0.8 mile SE of the E end of Quartzite Island. A sunken reef extends about 7 miles E from the E end of the same island.

Deadman Island lies close off the entrance to Knight Harbor on the SW side of Marble Island. Small craft can anchor between Deadman Island and Marble Island, as well as in Knight Harbor itself.

Nauja Cove (62˚42'N., 91˚14'W.), which indents the NW end of Marble Island, provides shelter for small craft from all but W and NW winds.

Anchorage.—Large vessels can find shelter, from all except SE winds, E of Deadman Island. Anchorage, with good holding ground and protection from most winds, can be taken N of Quartzite Island and off the entrance of Nauja Cove.

Caution.—A magnetic disturbance has been reported to exist S of Marble Island in the vicinity of the seaward end of the recommended track leading into Rankin Inlet.

Rankin Inlet

16.31 Rankin Inlet (62˚43'N., 91˚40'W.) is entered between Scarab Point and Papik Point, the NE extremity of Cape Jones, about 17 miles SW. This cape forms the E end of Pangertot Peninsula. The inlet is fouled by numerous rocks and shoals and there are no aids to navigation. Unsounded areas should not be entered. Local knowledge is essential for entering.

The inlet extends in a general WNW direction for about 27 miles to its head, and is divided into two parts in its inner reaches by the Kudlulik Peninsula and the Tudlik Peninsula. A mining community is situated on the N side of the former peninsula.

Vessels proceeding into Rankin Inlet from Marble Island are cautioned that strong tidal cross currents exist in this vicinity at flood. On the flood the usual set is to the SW at about 1 knot, but cross currents in the opposite direction have been observed. Tide rips are also evident.

It has been reported (1995) that ships approach Rankin Inlet from 2 to 3 hours before HW and depart in the same manner.

Local knowledge is strongly recommended for vessels proceeding to the head of Rankin Inlet.

16.32 North side of Rankin Inlet.—Falstaff Island (62˚49'N., 91˚51'W.), 54m high, lies off the mainland about 13 miles W of Scarab Point. This conspicuous and easily-identified island resembles a sugarloaf when seen from the vicinity of Marble Island.

Thomson Island (62˚49'N., 91˚58'W.), the largest island on the N side of the inlet, lies about 0.7 mile W of Falstaff Island and rises to an elevation of 54m near the middle of its N shore. Numerous islets and shoals lie off the S and SW sides of the island.

16.33 Head of Rankin Inlet.—Prairie Bay(62˚50'N., 92˚04'W.) lies in the NW part of Rankin Inlet between Kudlulik Peninsula and the mainland. The bay is generally shallow and fouled by numerous rocks, shoals, and islands. Mittik Island lies near the middle of the bay and has a 7m cairn on its N end. Sanderling Island, 19m high, lies in the W part of the bay and is fringed by a drying flat. A cairn stands on an islet close W of Sanderling Islet.

Kudlulik Peninsula (62˚48'N., 92˚05'W.) separates Prairie Bay from Melvin Bay to the S. Fist Point is the NE extremity of the peninsula and Survey Point is its SE extremity.

Johnston Cove (62˚49'N., 92˚04'W.), the site of the settlement of Rankin Inlet, lies about 0.5 mile NW of Fist Point. Esker Island forms the NE side of the cove.

The cove is shallow and the approach to it is intricate. It has been reported that a depth of 3m exists in the entrance channel. Charted depths within the cove range from 2.1 to 5.5m.

A galvanized metal warehouse standing near oil tanks is conspicuous on the S side of Johnson Cove. A conspicuous tower with red lights, and with white satellite dishes near its base, is located W of the oil tanks.

Melvin Bay (62˚48'N., 92˚07'W.) is entered between Survey Point and the E extremity of Tudlik Peninsula. Numerous islands and rocks, with deep passages between them, lie across the entrance to the bay. Buff Island, the E island of the group, is separated from Theron Island and Panorama Island by Access Passage. The recommended track into the bay leads through this passage which has a least depth of 11.6m.

The outer part of the bay, N of Panorama Island, is deep and clear. The inner part is generally shallow. A depth of 1.5m lies in the middle of the bay, about 0.3 mile N of the W end of Panorama Island.

Anchorage.—Anchorage with good shelter, in 20 to 31m, mud, can be taken W of Suvey Point.

Aukpik Island (62˚46'N., 92˚04'W.), small and low, lies almost 0.5 mile S of Buff Island. A chain of islands and shoals extends about 2 miles ESE from this island, terminating in a reef with a least depth of 2.7m. The recommended track lead-

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ing into Melvin Bay passes close N of this chain. Stickle Islet lies almost 1 mile ESE of Aukpik Island, with Net Island about 0.3 mile S. Hillock Islet, Hump Island, Slab Island, and Kango Island comprise a group of four islands lying W of Aukpik Island. A deep channel lies between Aukpik Island and Hillock Islet.

The SW part of Rankin Inlet has not been surveyed.

16.34 Southwest side of Rankin Inlet.—Longspur Island lies close off the mainland, about 5.7 miles S of the E end of Tudlik Peninsula. The coast between this island and Papik Point, about 10 miles ESE, is bordered by numerous islands and rocks lying close offshore. Only a few of the islands are over 9m high.

Sandy Islets, the Broken Islands, and Kind Islet, together with numerous unnamed islands, lie E of Longspur Island.

The **Mirage Islands** (62˚38'N., 91˚41'W.), a large group of islands lying NE of Papik Point, are surrounded by rocks and shoals. Isle of Cairns is the N island of this group; Crane Island is the E island of this group.

Caution.—It is reported that fixes based on the Mirage Islands give inaccurate positions.

16.35 Off-lying islands and dangers.—A chain of islands, rocks, and shoals extends about 11 miles ESE from Kudlulik Peninsula.

Fairway Shoals (62˚42'N., 91˚42'W.), the E danger, with a least depth of 3m, lie about 2.5 miles NNE of Isle of Cairns. Position Rock, which dries 1.8m and usually breaks, lies on the SE part of Fairway Shoals. Pin Rock, which dries 2.7m, lies about 2 miles WSW of Position Rock.

Separation Shoals (62˚45'N., 91˚55'W.) lie about 2.5 miles NW of Fairway Shoals and extend about 4 miles NW to Guillemot Island. Pod Rock, Little Pod Rock, Big Pod Rock, Harp Rock, and Kelp Rock all lie on Separation Shoals and dry 0.6 to 1.8m. A shoal depth of 1.2m lies at the SE end of Separation Shoals and 0.5 mile SW of the recommended track.

Guillemot Island (62˚46'N., 91˚59'W.), low and narrow, lies about 2.2 miles SE of Survey Point. Mannik Islet, also low, lies close SE of Guillemot Island. **Craig Rock**, which dries 3m, lies about 0.3 mile SW of Mannik Islet. Guillemot Rocks, a group of drying rocks, lies about 0.4 mile W of Guillemot Island.

Bag Island (62˚47'N., 92˚02'W.), 6.4m high and surmounted by a cairn, lies 1 mile NW of Guillemot Island. Cur Island, marked by a cairn, and Kresik Island are the two largest islands of a group which lie N of Bag Island.

Middle Shoals (62˚45'N., 91˚49'W.), about 2.5 miles long, lie N of the SE end of Separation Shoal, with a deep channel between them. Hidden Rock dries 0.3m on the SW side of Middle Shoals.

Guillemot Bank, separated from Middle Shoals to the SE by a deep channel, lies NE of and parallel to Separation Shoals. A depth of 2.8m lies near its NE end and a depth of 5.2m lies near its middle part. The recommended track passes between this bank and Separation Shoals.

16.36 Horseshoe Deep (62˚47'N., 91˚57'W.), a large area of deep water, lies between the NW end of Guillemot Bank and Thomson Island.

Anchorage.—Anchorage can be taken, in 22m, mud, in the E part of Thomson Passage, between Thomson Island and the mainland. Anchorage can be taken in the NE part of Melvin Bay, in depths of 20.1 to 31.1m, mud, sheltered from all winds and weather. Anchorage can be taken in Prairie Bay, off the entrance to Johnston Cove, in 11.9m, about 0.4 mile E of the SE extremity of Esker Island. This exposed anchorage is not recommended for a lengthy stay.

Pilotage.—It is strongly recommended that commercial vessels, regardless of size or draft, obtain the services of a pilot, which can be arranged through the Hudson's Bay Company at the head of Rankin Inlet. Pilots board in the vicinity of Marble Island or at the anchorage ESE of Kresik Island (61˚48'N., 92˚01'W.).

Directions.—Vessels bound for the head of Rankin Inlet should steer for a position 3 miles S of the E end of Quartzite Island. From this position a course of 286˚ for 26 miles will lead over a least depth of 13.7m to a position 5 miles S of the E end of Falstaff Island. Care should be taken to closely adhere to this track as it passes within 0.2 mile of a 10.4m shoal and within 0.5 mile of some 7.3m patches.

From this position a course of 310˚ will lead between Separation Shoals and Guillemot Bank, over a least depth of 36.6m. Depths of 4.6m exist within 0.2 mile of this track in the vicinity of Harp Rock. When the NW tangent of Guillemot Island bears 252˚, distant almost 1 mile, course should be altered to 285˚ for 1.2 miles. When the cairn on Cur Island bears 320˚, distant 1 mile, course should be altered to 324˚ for about 0.4 mile over a least depth of 6.7m, until the cairn on Kresik Island bears 002˚, distant 0.5 mile. Course should then be altered to bring the cairn ahead for about 0.1 mile to clear the 3m shoal 0.2 mile NE of Bag Island. The least depth on this course is 7m. After running this course until the cairn on Kresik Island is distant 0.4 mile and the cairn on Cur Island bears 308˚, course should be altered to 321˚ for 0.5 mile. This course leads over a least depth of 11m and passes within 0.1 mile of a 1.5m depth W of the S end of Kresik Island.

When the cairn on Cur Island is abeam, bearing 232˚, alter course to 332˚ and proceed about 1 mile to the inner anchorage off Johnston Cove over a least depth of 8.5m.

It is strongly advised that a local pilot be employed before attempting this passage.

Directions for Melvin Bay Anchorage.—Vessels proceeding to the anchorage in Melvin Bay should follow the track from Marble Island until Dark Point, the NE extremity of Thomson Island, the largest island on the N side of Rankin Inlet, bears 005˚, distant 3.7 miles. Course should then be altered to 274˚, with the highest point of Net Island ahead. Follow this course for 2.3 miles, crossing Separation Shoals over a least depth of 12.8m. A depth of 7m lies close to starboard on this course. When the W tangent of Guillemot Island bears 347˚, distant 1 mile, alter course to 302˚ bringing the highest point of Theron Island almost in line with the cliff edge on the SW side of Panorama Island. When the highest point on Aukpik Island has passed abeam to port, alter course to 315˚ and proceed through Access Passage in mid-channel.

A rock, with a depth of 0.1m, lies about 135m off the NW side of Buff Island, and the W side of Access Passage should be favored when passing this rock. Once past the rock, alter

course to 336˚ and proceed to the charted anchorage and anchor, in depths of 20.1 to 31.1m, mud.

16.37 Johnston Cove Settlement (62˚49'N., 92˚04'W.), the principal settlement in Rankin Inlet, consists of a Hudson's Bay Company store, two church missions, a fish cannery, a school, and a nickel mine.

The high mineshaft frame, the high radio tower about 0.5 mile W of the settlement, and the oil tanks S of the settlement are conspicuous from the offing.

In Rankin Inlet, the highest spring rise of the tide is 4.6m.

Little information is available regarding the opening and closing of the navigation season in Rankin Inlet. However, the inlet usually opens in July and closes in October.

The coast between Rankin Inlet and Dawson Inlet, about 60 miles SW, is indented by numerous bays and fronted by many islands, rocks, and shoals, which lie up to 10 miles offshore in places.

Corbett Inlet (62˚28'N., 92˚10'W.) is entered between the SW extremity of Cape Jones, about 6 miles SSW of Papik Point, and Igloo Point, about 10 miles farther SSW. This inlet has not been examined, but appears to contain many drying shoals.

Caution.—A local magnetic anomaly is reported in the entrance to Corbett Inlet.

16.38 Igloo Point (62˚22'N., 92˚05'W.) is the E extremity of the Pork Peninsula, which extends about 14 miles E from the mainland.

Dunne Foxe Island is the largest of a group of islands lying in the entrance to an unnamed bay about 5 miles SW of Igloo Point. A light, with a radar reflector, is shown from the E of the islets extending E from Dunne Foxe Island. Shoals, some of which appear to dry, extend 10 miles ESE of Dunne Foxe Island, in which position there is a depth of 2m.

Pistol Bay (62˚27'N., 92˚41'W.) lies at the head of a large unnamed bay which is entered between Igloo Point and Term Point, about 18 miles SW. Both of these bays have not been examined.

Term Point (62˚08'N., 92˚28'W.), about 6.1m high and said to be the most conspicuous headland between Baker Foreland and Eskimo Point, is the SE extremity of an unnamed island. A 6.1m shoal lies about 10 miles ESE of Term Point. Hell Gate, the passage between the above island and the peninsula extending from the mainland, provides excellent anchorage, in a depth of 20.1m, about 0.5 mile S of the S entrance.

Whale Cove (62˚10'N., 92˚34'W.), entered close W of Hell Gate, has a depth of 67.7m in its entrance shoaling gradually to a depth of 23.8m at its head.

Anchorage.—Anchorage is provided in the cove entrance, but the bottom is rock and is unprotected from the N.

The settlement in the NW part of the cove consists of two church missions, a school, a post office, and a nursing station.

16.39 Wilson Bay (62˚14'N., 92˚45'W.), entered close W of Whale Bay, provides good anchorage over a mud bottom near its head. Good shelter is provided from all winds, but numerous shoals, some of which dry, foul the bay. A conspicuous bluff lies on the W side of a long island, about 4.5 miles NNW of the E entrance point of Wilson Bay.

Mistake Bay (62˚08'N., 92˚49'W.), the next bay to the S, is reported to be fouled by numerous islands and shoals.

The **Morso Islands** (62˚03'N., 92˚39'W.), which consist of two large and several small islands, lie about 7 miles SW of Term Point. A white wooden beacon, 6.1m high, stands on the S island and is visible for 7 miles. Several shoals lie up to 3 miles S and SE of these islands. It is recommended that a wide berth be given this part of the coast when passing.

Walrus Island (61˚58'N., 92˚28'W.), small in extent, with an elevation of 17m, lies about 5 miles SE of the Morso Islands. Vessels proceeding along this coast are advised not to pass closer than 4 miles off this island. A light tower, fitted with a racon, is shown from the island. Several rocks, with depth of less than 1.8m, lie about 2 miles NE and 4 miles W of the island.

Flattop Island (62˚02'N., 92˚57'W.), 21.3m high and conspicuous, lies about 7 miles W of the Morso Islands. Numerous islands, interspersed with shoals, some of which break in slight seas, extend S and SE for 7 miles from Flattop Island.

Tavani (62˚04'N., 93˚06'W.), the site of an unoccupied settlement and a former Hudson's Bay Company trading post, stands on the mainland about 4 miles W of Flattop Island. A conspicuous flattop hill lies 0.5 mile S of the unoccupied settlement.

Caution.—A considerable magnetic anomaly has been reported in the vicinity of Tavani.

Vessels drawing more than 3.7m should not proceed W of Walrus Island toward Tavani without local knowledge.

Nevill Bay (61˚57'N., 93˚04'W.), a long narrow indentation with the Ferguson River discharging into its head, lies about 5 miles S of Tavani. Bibby Island, which forms the SE side of the bay, is fronted by numerous islands which lie up to 10 miles E and SE of it.

16.40 Dawson Inlet (61˚49'N., 93˚12'W.), entered close S of Bibby Island, extends about 18 miles WNW and is about 5 miles wide. Numerous islands lie off its S side and the Copperneedle River flows into its SW part. The inlet has not been surveyed. Breakers have been reported 6 miles E of Angusko Point, the SW entrance point of the inlet.

The coast between the S entrance point to Dawson Inlet and Eskimo Point, about 46 miles SSW, is marked by a number of long narrow points and ridges and bordered by numerous islands. These ridges extend up to 50 miles inland in places.

Sioralit Point (61˚44'N., 93˚19'W.), lying about 4 miles SW of Dawson Inlet, is the N entrance point of a sheltered bay which is reported to have a least depth of 6.4m. Sioralit Point can be identified by some cabins which stand on it.

Maguse Point (61˚20'N., 93˚49'W.), the E extremity of Austin Island, lies about 28 miles SSW of Sioralit Point. Although only 15m high, the point is conspicuous. Austin Island, 36m high, lying in the mouth of the Maguse River, divides it into two unnavigable channels.

Sentry Island (61˚09'N., 93˚52'W.), long and narrow, lies 11 miles S of Maguse Point and 4.7 miles NNE of Eskimo Point. A conspicuous lattice-work beacon stands in the middle of the S side of the island. The island has been reported to be a good radar target up to 15 miles. A light, fitted with a racon, is shown from the highest point of the island.

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Foul ground, which dries in places, extends up to 7 miles E from the island. Vessels approaching Eskimo Point should pass S of this area. A shoal area, with depths of less than 5.5m, extends up to 3.5 miles S from the W end of the island. The area W of this line is foul. Vessels should pass at least 8 miles E of the island.

Eskimo Point to Cape Henrietta Maria

16.41 The coast between Eskimo Point and Cape Henrietta Maria, about 480 miles SE, is devoid of off-lying islands. The depths near the coast are very shallow and with the exception of Churchill Harbor and Port Nelson, the inlets are inaccessible to vessels other than small craft.

South of Churchill Harbor the coast is low and flat, the land rising gradually from the swampy land within the coastline. The large rivers found along this section of coast discharge quantities of sand and clay which form bars and shoals in their estuaries.

Depths—Limitations.—Soundings along this section of coast, especially in the approach to Churchill Harbor, can best be seen on the Canadian charts. It was reported that depths in the approach to this harbor were less than those charted.

Although depths appear to be ample, the scarcity of soundings along the greater part of this coast precludes definition of a safe meter curve. A number of dangers lie inshore of a line of bearing between Eskimo Point, Cape Churchill, and Cape Tatnam. Shoal depths are charted as far as 13 miles offshore between Cape Tatnam and Cape Henrietta Maria, about 320 miles ESE.

Eskimo Point (61˚06'N., 94˚00'W.), a long, narrow, sandy point lying 5 miles SW of Sentry Island, can be identified by the buildings of the settlement and a conspicuous church spire on the N side of the point.

Caution.—A local magnetic anomaly exists about 50 miles E of Eskimo Point.

16.42 Arviat (61˚06'N., 94˚04'W.) lies on the N side of the point about 2.5 miles W of the extremity and consists of a church mission, a Hudson's Bay Company store, a school, a nursing station, and a police detachment.

Tides—Currents.—The tidal current is 2 knots on the ebb and up to 5 knots on the flood, being strongest in shallower water.

Aspect.—Six large oil tanks S of the settlement are conspicuous, as is a 5m high wooden cross erected on the S point of a narrow peninsula about 1 mile N of the settlement.

Pilotage.—A pilot is recommended if proceeding from the anchorage to the settlement. Pilotage can be obtained through the Hudson's Bay Company at the settlement.

Anchorage.—Anchorage can be taken about 1.7 miles E of the settlement, in good holding ground of gray mud and sand, over a depth of 5m.

Caution.—Care should be taken to avoid the foul ground which extends up to 7 miles E from the island.

It has been reported that a least depth of 2.7m exists between the anchorage and the settlement.

Between Eskimo Point and the mouth of the Egg River, about 75 miles SSW, the low, marshy coast is fringed by a drying reef which extends up to 5 miles offshore. This section of coast should be given a wide berth when passing.

Egg Island (59˚55'N., 94˚50'W.), small and low, lies in the mouth of the Egg River and divides the entrance into two channels. A conspicuous abandoned trading post is situated on this island.

The low, marshy coast between Egg Island and Hubbart Point, about 35 miles S, is bordered by drying ridges. The 35m curve lies 9 miles off Egg Island and 4 miles off Hubbart Point.

Approach to Churchill Harbor

16.43 Between Hubbart Point and Cape Churchill, about 55 miles SE, the coast extends S and then E forming an extensive bight. Churchill Harbor lies just within the entrance of the Churchill River, about midway along this bight.

Hubbart Point (59˚11'N., 94˚40'W.), about 9m high and con-spicuous, is the NE extremity of a group of islands lying on a drying spit which extends 3 miles NNE from the mainland. A conspicuous beacon stands on the smallest island.

Anchorage.—Anchorage can be taken, in a depth of 14.6m, 1.5 miles SE of Hubbart Point, sheltered from W winds.

From Hubbart Point, the coast extends S for about 25 miles to the delta of the North River and then about 15 miles SSE to the head of Button Bay. This shoal indentation lies close W of Churchill Harbor. A rocky peninsula, about 42m high, separates the bay from the Churchill River.

This section of coast is bordered by a wide shoal area and, except in the actual approach to Churchill Harbor, should not be approached closer than the 20m curve, which lies up to 14 miles offshore in places.

Churchill Harbor (58˚47'N., 94˚11'W.)

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16.44 Churchill Harbor, the terminal port of the Canadian National Railway, lies at the mouth of the Churchill River. The town of Churchill, with its grain elevators and port facilities, lies on the E side of the river, close SE of its mouth. The port is a major grain terminal for the shipment of Canadian wheat. There is a port radio station at Churchill.

Winds—Weather.—The only gales that affect the harbor are those from the NE, which send in a choppy sea for a short distance inside the entrance and along the NW side. The E side is calm at all times. The prevailing winds are from the NW. Remarkably little fog is experienced in Churchill Harbor.

Ice.—For unstrengthened vessels, navigation through Hudson Strait and Hudson Bay to Churchill Harbor is generally possible by the last week of July.

The Canadian Coast Guard provides ice information and routing and icebreaker assistance in Hudson Strait and Hudson Bay. To obtain these services vessels should, before entering Hudson Strait, communicate with NORDREG CANADA through any Coast Guard radio station. There is an ice information office at Churchill where vessels can obtain ice information prior to sailing.

The latest departure dates are governed by the start of ice formation in Churchill Harbor. Navigation usually ends about October 20.

An icebreaker is stationed in Hudson Strait until the end of navigation and may be contacted if a vessel becomes ice-bound during passage to or from Churchill. All vessels planning to transit Hudson Strait and Hudson Bay are advised to have a copy of the Canadian Ministry of Transport publication "Ice Navigation in Canadian Waters" on board.

Tides—Currents.—The tidal range varies from 4.8m at springs to 3.4m at neaps.

Ebbing surface flows at the mouth of the river, near Merry Rock, can reach speeds of 5 knots and can cause a slight set towards the NW shore. Ebbing surface flows near the Ports Canada Wharf reach speeds of 4 knots and tend to set in a NE direction onto the wharf.

There is a noticeable current along the E and W shores of Cape Merry during the ebb tide. The flow is stronger along the W shore and can reach speeds of almost 1 knot near the surface.

During the flood, surface flows reach about 3 knots at the river mouth near Merry Rock and about 2 knots near the Ports Canada Wharf; this current tends to run parallel to the wharf.

Shear lines develop and are visible near the W side of the dredged channel; currents outside the deeper dredged areas are significantly weaker than those in the channel. These shear lines are most prominent during spring tides.

During the ebb, the river flows into Hudson Bay in a strong jet, running in a NE direction past Merry Rock Lighted Buoy. There may be rips and eddies near and N of this buoy during spring tides. During strong NE and E winds, steep waves develop at the river mouth on the ebb tide.

At the wharf, very strong currents are experienced during the ebb and special mooring precautions may be required.

Depths—Limitations.—Depths in the approach to the harbor entrance range from 19.8m at Fairway Lighted Bell Buoy, shoaling gradually to a depth of 7.1m about 0.5 mile NE of the entrance, then increasing to depths of 11.3 to 21.3m in the entrance between Cape Merry and the mainland to the NW.

There are four grain berths having a combined length of 845m. Grain Berth 1 and Grain Berth 2 have an alongside depth of 9.4m. Dagliesh Berth has an alongside depth of 10m. The Coastal Berth is 91m long and has a depth of 6.1m.

A vessel less than 162m long can enter on the flood tide and turn N on the port anchor. Larger vessels enter on the ebb tide and lie south, turning on the next flood.

Vessels berthed heading S should be secured by a minimum of four head lines and two breast lines as a precaution against the strong ebb flow. A vessel berthed heading N should use six stern lines as well as after springs.

Aspect.—The approach to Churchill is well marked and comparatively easy to identify. Approaching from the N or NE, the land in the vicinity appears as a series of islands, which gradually merge upon closer approach. The white, grain elevator on the E side of the harbor, from which a light is shown, is visible up to 20 miles offshore and has been identified by radar at a range of 27 miles. A radio mast, 34m high, is situated 0.4 mile E of the elevator and is occasionally marked by red obstruction lights. Some oil tanks, 0.2 mile NE of the elevator, are prominent. There is a conspicuous water tower, marked by red obstruction lights, 2.8 miles SE of the grain elevator. There is an aeronautical light, 0.4 mile ENE of the water tower, on the control tower of Fort Churchill Airport. Other conspicuous objects are the black, flat-topped Fort Prince of Wales on the W side of the harbor, the radio mast 3.5 miles E of the elevators, and the water towers SE of the elevators.

Courtesy of Michael Macri for OmniTRAX, Inc.
Churchill

Pilotage.—Pilotage is compulsory for merchant vessels entering or shifting berth in Churchill Harbor. Vessels can arrange for a pilot through Canadian Coast Guard radio stations or may call the Port Warden's office or the pilot boat directly on VHF. The pilot boat meets vessels about 4 miles NE of the harbor near Fairway Lighted Bell Buoy. It is essential that a vessel's ETA is known at least 3 hours in advance so that the pilot boat will be on station.

Regulations.—Churchill Harbor is a Ports Canada harbor, thus vessels in the harbor are subject to "Ports Canada By-law A-1: Operating Regulations." A copy of these can be obtained from the Port Administration.

Anchorage.—The recommended anchorage area lies 1 to 3 miles NE to NW of Fairway Lighted Bell Buoy, in depths of 20.1 to 25.6m, sand and mud. This anchorage is exposed and vessels may have difficulty in maintaining their anchorage in strong NE winds. When adverse weather is expected, vessels are advised to heave anchor and proceed to sea until the weather moderates.

Small vessels may consult harbor authorities regarding possible short-term anchorages inside the harbor.

It is not advisable to anchor closer in as the ebb stream increases in strength towards the harbor entrance, where it runs strongly, and there is danger of dragging ashore if an unexpected NE gale develops.

It is reported that there is also anchorage 5 miles NNW of Eskimo Point, in a depth of 20.1m, sand, gravel and rock.

The density of the water in Churchill Harbor must be taken by hydrometer during loading operations to ensure vessels are loaded to the correct freeboard. The density varies at different stages of the tide. It can range from completely fresh at LW to completely salty at HW.

Directions.—From a position about 18 miles N of Mansel Island Light, a course of 243˚ should be steered to cross Hudson Bay to a position bearing 037˚, distant 14 miles, from the grain elevator at Churchill.

Care should be taken to correctly identify the grain elevator at Churchill. The radio towers about 3 miles E of the grain elevator may be the first landmarks to be sighted. Vessels

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should bear in mind that across Hudson Bay, the magnetic variation changes about 1˚ in every 10 miles.

From the above position, the fairway lighted bell buoy should be steered for with the grain elevator bearing not more than 217˚ until the lighted entrance beacons or their topmarks are in line bearing 236˚25'. Alter course to this heading, which will lead up to and through the entrance to the harbor. Once inside the harbor, the harbor range beacons and buoys will indicate the channel to the wharf.

Caution.—Vessels of less than 162m berthed heading S should secure the anchor chain to a mooring bollard as a precaution against parting the forward mooring lines. During the strong ebb current, the chain should be left slack.

Cape Churchill to Cape Tatnam

16.45 Cape Churchill (58˚47'N., 93˚15'W.), a low and marshy point lying 30 miles E of Cape Merry, the E entrance to the Churchill River, is the NW extremity of a peninsula which extends about 2.2 miles NW from the general line of the coast. A square-shaped beacon with a pyramidal top stands about 0.5 mile S of the cape.

The W one-third of the coast between Cape Merry and Cape Churchill is fronted by low rocky cliffs which are characteristic of the shores at the mouth of the Churchill River. A gravel patch, with a depth of 1.5m, lies 2.7 miles N of Cape Churchill. The remaining two-thirds of the coast is low and marshy. The W side of Hudson Bay N of Churchill, being very low, is scarcely visible, except at Hubbart Point.

Halfway Point, a small rocky headland, projects from the coast about 11 miles E of Cape Merry.

Caution.—The rocket-launching tower SSE of Halfway Point is reported to be somewhat similar in appearance to the grain elevator.

16.46 The **Fox Islands** (58˚48'N., 93˚35'W.), two small low islands, lie about 1.5 miles NW of Watson Point.

Knights Hill and Stony Knoll, two small mounds which are the only natural conspicuous features in the vicinity, lie 1 mile S and SW of Watson Point.

Churchill Shoals (58˚54'N., 93˚45'W.), lying between Halfway Point and the Fox Islands, extend up to 7.5 miles offshore. This area of foul ground, which has general depths of less than 5.5m, has several drying patches which uncover up to 1.8m. Vessels when passing should approach within depths of less than 18.3m.

La Perouse (58˚44'N., 93˚25'W.), a drying bay, lies about 4.5 miles SE of Watson Point.

16.47 At **Cape Churchill** (58˚47'N., 93˚15'W.), the W side of Hudson Bay turns sharply to the S and extends about 100 miles in this direction to the mouth of the Nelson River. The low coast between Cape Churchill and Rupert Creek, about 75 miles to the S, is intersected by a number of creeks and backed inland by wooded valleys. A shoal bank, which dries along its inner part, lies as far as 10.5 miles offshore between Cape Churchill and Rupert Creek, and then about 6 miles offshore as far S as the Nelson River.

Between Rupert Creek and Cape Tatnam, about 54 miles ESE, the coast recedes to form a large bay into which the Nelson River and the Hayes River discharge. The low, swampy shores of this bay are intersected by many creeks and flooded in places at HW. Port Nelson lies on the Nelson River and York Factory lies on the Hayes River.

Caution.—Because of the natural changes in the Nelson River and its approaches, the charted depths cannot be relied on.

16.48 Approaches to the Nelson River and the Hayes River.—Nelson Shoal lies about 9 miles E of Rupert Creek and is composed of gravel with a few large boulders. The shoal is covered with about 0.6m of water at HW, but dries 4.9m at LW. This shoal is the major danger in the approach to the Nelson River and it is advisable to take soundings continuously when navigating in this area.

The W shore of the bay extends about 22 miles S from Rupert Creek to Sam Creek, which discharges at the NW entrance point of the Nelson River. The 5m curve lies about 4.5 miles E of this latter creek.

Cape Tatnam (57˚16'N., 91˚00'W.), on the E side of the approach to Port Nelson and York Factory, is low and swampy and can be identified by trees 0.5 mile inland and a conspicuous boulder at the mouth of a stream on its W side. The bottom is uneven for a considerable distance off the cape, and vessels should remain in depths of greater than 9.1m when passing Cape Tatnam.

Tatnam Shoal, lying 4 miles NNW of Cape Tatnam, consists of a pile of boulders, drying 1.5m, with shoal water and sunken rocks extending 2 miles farther seaward.

Between Cape Tatnam and Marsh Point, about 43 miles SW, the coast is bordered by drying flats which extend up to 2 miles and more offshore. The mud flats extend up to 5 miles off Marsh Point, the W entrance point of the Hayes River. A beacon, consisting of a framework structure, 24m high, with white wooden slats on the N face of its upper part, stands close to the NE extremity of Marsh Point.

The Hayes River is not navigable in the narrow channel between the mud banks. An abandoned Hudson's Bay Company post known as York Factory lies on the W side of the river, about 3 miles above the entrance.

The Nelson River is separated at its entrance from the Hayes River to the E by a broad peninsula terminating in Marsh Point. The estuary of the river is known as Port Nelson and the abandoned settlement of the same name lies on the W side of the river close inside the entrance.

Depths—Limitations.—Depths in the river channel as far as the abandoned settlement are generally more than 5.5m, but reliance on these depths and the position of the channel as charted may well change because of continuous silting. York Roads is the area immediately seaward of the entrances of the Hayes River and the Nelson River.

Anchorage.—Anchorage can be taken, in a depth of 12.8m, with Marsh Point bearing 207˚ distant 12 miles.

The roadstead at Port Nelson is exposed to NE gales, which occur frequently during the navigation season. Entry to Port Nelson should only be attempted at HW.

Cape Tatnam to Cape Henrietta Maria

16.49 Between Cape Tatnam and Cape Henrietta Maria, the W entrance point of James Bay, about 320 miles ESE, the low coast, is fronted by shoal ground which extends several miles offshore in places. The coast is exposed to N winds and there are no anchorages.

The **Kaskattama River** (57˚03'N., 90˚07'W.) flows into the bay about 30 miles ESE of Cape Tatnam. The mouth of the Black Duck River lies about 38 miles farther ESE. A former summer trading post of the Hudson's Bay Company lies on the W bank of the Kaskattama River, about 4 miles within the entrance. A concrete monument, which marks the approximate boundary between the provinces of Manitoba and Ontario, stands near the mouth of the Black Duck River.

West Pen Island (56˚52'N., 88˚52'W.) lies close E of the mouth of the Black Duck River, and East Pen Island lies about 10 miles farther ESE. A conspicuous 15m high knoll rises on the mainland opposite East Pen Island.

The **Severn River** (56˚02'N., 87˚32'W.) flows into the bay about 55 miles SE of East Pen Island. The low shores on either side of its entrance are fronted by sand and gravel flats which extend about 3 miles offshore. Partridge Island lies in the mouth of the river, dividing its entrance into two channels. The N channel is navigable by small craft with a draft of less than 1.5m. The island is only 4.6m high and flat.

Aerial view of Fort Severn

The settlement of Fort Severn, which contains a Hudson's Bay Company store and two missions, lies on the N bank of the river, about 6 miles above the entrance.

Shallow draft barges operated by the Hudson's Bay Transport Service supply the settlement. Local knowledge is essential. A local pilot is available.

Aerial view of Fort Severn

Entrance to the river must be made at HW to clear the mud bars at the mouth of the river. Having cleared the bars, a draft of 2.4 can be carried upriver as far as the settlement.

The **Winisk River** (55˚18'N., 85˚04'W.), entered between Wabuk Point and Flagstaff Point, about 90 miles ESE of Partridge Island, is fronted by foul ground and is navigable only by very small craft. Numerous islands lie within this shallow river.

16.50 Cape Lookout (55˚17'N., 83˚56'W.) lies about 37 miles E of Flagstaff Point. Shoal ground is reported to extend for a considerable distance seaward along this stretch of coast. A sunken reef is reported to extend NW from the cape, and a small island, composed of boulders and pebbles, lies about 0.3 mile off this cape.

Little Cape (55˚15'N., 83˚44'W.), about 8 miles E of Cape Lookout, forms the E side of a small bay into which the Kinushseo River and the Sutton River empty. The bay is fouled by shoals and boulders.

An unnamed island, 7.6m high, lies close offshore about midway between Little Cape and Cape Henrietta Maria, about 48 miles to the E. Another island, marked by a small rock beacon, is reported to lie about 3 miles W of this island; drying reefs extend up to 8 miles offshore. Small craft can shelter in the lee of this latter island.

A shallow bay, obstructed by mud flats at its head, lies close W of Cape Henrietta Maria. A small island lies near the W entrance point of this bay.

Cape Henrietta Maria (55˚10'N., 82˚21'W.) is described in paragraph 15.63.